

IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF PENNSYLVANIA

AMERANTH, INC.

Plaintiff,

V.

DOORDASH, INC.,
EAT'N PARK RESTAURANTS, LLC, and
EAT'N PARK HOSPITALITY GROUP, INC.,

Defendants.

Civil Action No. 2:23-cv-2165-WSH

PUBLIC VERSION

**PLAINTIFF AMERANTH, INC'S OPPOSITION TO
DEFENDANTS' MOTION TO DISMISS AMENDED COMPLAINT FOR IMPROPER
VENUE, OR ALTERNATIVELY, TO TRANSFER, AND
FAILURE TO STATE A CLAIM**

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I. INTRODUCTION

Ameranth filed its First Amended Complaint ("FAC") on September 17, 2024 (Dkt. 51), asserting U.S. Patent 11,842,415 (the "'415 patent") and U.S. Patent No. 11,847,587 (the "'587 patent") (collectively, the "Network Patents"). and Defendants filed their Motion to Dismiss Amended Complaint for Improper Venue, or Alternatively, to Transfer, and Failure to State a Claim (the "Motion") on October 22, 2024. (Dkt. 57.) Ameranth submits this Opposition in response to Defendants' Motion

II. SUMMARY OF THE ARGUMENT

Before the Court can turn to Defendants' motion to dismiss for failure to state a claim, the Court must address the venue challenge brought by DoorDash, Inc. ("DDI").¹ Venue is proper here under the "second prong" of § 1400(b). In addition to Pittsburgh being the nexus of their copying activities, Ameranth's FAC sufficiently pleads DDI has at least one brick-and-mortar place of business (DashMart) in this District where infringement occurs and which DDI owns and controls. Although DDI refutes its own public statements, including but not limited to, its SEC filing and its website, as identified in the FAC, DDI's own press release announcing DashMart identifies DDI, not DoorDash Essentials, LLC ("DDE"), DDI's alter ego. In addition, DDI's copycat research and development is occurring in Pittsburgh, via its multi-year collaboration with Carnegie Mellon University ("CMU"). DDI's venue motion should thus be denied.

Defendants ignored that at the motion to dismiss stage, the facts must be viewed in the light most favorable to Ameranth. The FAC pleads multiple plausible facts that, per Federal Circuit

¹ *In re Nintendo Co.*, 544 F. Appx. 934, 941 (Fed. Cir. 2013) ("[A] trial court must first address whether it is a proper and convenient venue before addressing any substantive portion of the case.").

precedent, such as *Cellspin Soft, Inc. v. Fitbit, Inc.*,² result in dismissal of Defendants' Motion. In addition, contrary to blackletter law, Defendants rely on earlier cases involving vastly different claims from other Ameranth patents without substantively analyzing the actual Network Patents' claims. The Network Patents' claims explicitly recite technological improvements, inventive concepts, and how to engineer and program them. The Network Patents' claimed inventions improve the operation of web server computers and networks and solved the CAP Theorem Challenge, allowing system designers to be able to successfully implement a distributed database that simultaneously achieves the design goals of consistency, availability, and partition-tolerance.³ This results in improved distributed computing systems that are failure tolerant and do not crash and become unavailable due to not being able to efficiently and optimally process a partition and change to the database. Defendants' motion for failure to state a claim should be denied.

III. ARGUMENT

A. Venue Is Proper in This District

The FAC alleges Defendants have committed acts of infringement in this District, personal jurisdiction exists, neither Eat'N Park defendant has challenged venue, and the *prima facie* evidence of the FAC and DDI's own public statements confirm that the three requirements of *Cray* are satisfied – (1) DDI has a physical place in this district, (2) that physical place is regular and established, and (3) it is the place of DDI.⁴ In addition, DDI's own documents and actions contradict its declaration submitted in this case, and all contradictions are to be viewed in

² 927 F.3d 1306 (Fed. Cir. 2019).

³ "Partition-tolerance means that a cluster of nodes must continue to work despite any communication breakdowns between nodes in the system." FAC at ¶ 62.

⁴ *In re Cray Inc.*, 871 F.3d 1355, 1362 (Fed. Cir. 2017) (§ 1400(b) requires that "a defendant has" a "place of business" that is "regular" and "established."). DDI has not challenged that the FAC alleges it has committed acts of infringement in this District.

Ameranth's favor.⁵ For example, the Kelsey Merrigan Declaration ("Merrigan Decl.") (Dkt. 62) at ¶¶ 28-29 [REDACTED]

[REDACTED] Yet, as further detailed below, DDI's press release announcing DashMart⁶ explicitly identified DDI and made *no mention* of DDE. Additionally, the Merrigan Decl. tellingly [REDACTED]

[REDACTED] since the declaration is [REDACTED]

[REDACTED]⁷ (Dkt. 62 at ¶ 2.⁸)

DDI initially announced and continues to announce that DashMart is "fully owned, operated, and curated by DoorDash." FAC at ¶¶ 12-13. DDI's December 6, 2021 press release announcing DashMart states "***DoorDash (NYSE: DASH)*** is introducing ultra-fast grocery deliveries in 10-15 minutes beginning with DashMart in New York City," "Founded in 2013, DoorDash enables local businesses to address consumers' expectations of ease and immediacy and

⁵ *ClubCom, Inc. v. Captive Media, Inc.*, No. 02:07cv1462, 2008 WL 2036907, at *3 (W.D. Pa. May 9, 2008) ("The court may examine facts outside the complaint to determine proper venue, but must draw all reasonable inferences and resolve all factual conflicts in the plaintiff's favor." (quotation omitted); *Lockhart v. Garzella*, No. 3:19-cv-00405, 2020 WL 6146598, at *2 (S.D. Ohio Oct. 20, 2020) ("If the court determines that the [Rule 12(b)(3)] motion can be decided without a hearing, it 'must consider the pleadings and affidavits in the light most favorable to the plaintiff.' *Welsh v. Gibbs*, 631 F.2d 436, 439 (6th Cir. 1980), cert. denied, 450 U.S. 981, 101 S.Ct. 1517, 67 L.Ed.2d 816 (1981). If the plaintiff presents a *prima facie* case that venue is proper, after reviewing the pleadings and the affidavit(s) so construed, the defendant's motion will be denied, notwithstanding contrary allegations made by the defendant. *Serras*, 875 F.2d at 1214.").

⁶ [REDACTED] Merrigan Decl. at ¶ 15.

⁷ [REDACTED] (Dkt. 62 at ¶ 2.)

⁸ All emphasis added unless otherwise specified.

thrive in today's convenience economy," *the DASH stock symbol is for DDI*, and DDI, not DDE, was founded in 2013.^{9,10} See Ex. A.¹¹

As a publicly traded company, DDI must make truthful SEC disclosures.¹² As specified in FAC ¶ 7, DDI's Form 10-K for Fiscal Year 2022 states that "[w]e face certain risks in connection with **the operation** of **DashMart** and Wolt Market, our *first-party owned and self-operated* convenience and grocery delivery businesses." See Ex. B¹³ at pp. 28, 125; see also Ex. C at p. 25 ("We face certain risks in connection with our *self-operated* convenience, grocery, and other retail businesses, including DashMart and Wolt Market."). The 10-K states that "[u]nless the context requires otherwise, we are referring to DoorDash, Inc. together with its subsidiaries when we use the terms 'DoorDash,' the 'Company,' 'we,' 'our,' or 'us.'" Ex. B at p. 5; Ex. C at p. 5. The context of the passage using "we" and "our" at the beginning of this paragraph clearly indicates that DDI is the "first-party"¹⁴ which owns and "self-operates" DashMart.¹⁵ By use of "first-party" in reference to "owning" DashMart, the language requires that DDI is the owner and operator of DashMart due to the fact that (1) public records show that DDI is in fact the owner, and (2) DDE is not mentioned at all in the entirety of the 10-K.¹⁶ Any attempt by DDI to argue that its own

⁹ DDI was formed May 21, 2013, Merrigan Decl. at Ex. A, and DDE was formed August 22, 2019. *Id.* at Ex. C.

¹⁰ Had DDE been the company actually controlling and operating DashMart, the press release would have identified DDE, not DDI.

¹¹ Exhibits cited in this brief are attached to the co-filed Declaration of Richard C. Weinblatt.

¹² *U.S. v. Bilzerian*, 926 F.2d 1285, 1298 (2d Cir. 1991) ("[C]riminal penalties are available against one who knowingly makes a false and misleading statement of material fact on a document required to be filed by the securities laws." (citing 15 U.S.C. § 78ff)).

¹³ This exhibit is a digital printout of the same Form 10-K cited and identified in the FAC at ¶ 7.


¹⁴ Terminology such as "first-party," "second party," etc. refers to parties mentioned in the document which uses such terminology


¹⁵ "First-party" must apply to both "own" and "operate," because that is what the passage explicitly says.

¹⁶ DDI's 2022 and 2023 SEC Form 10-Ks do not identify DDE as a subsidiary of DDI at Exhibit

statements in the 10-K should just be ignored fail under the logic of the court in *Expedia*¹⁷:

[T]he Form 10-K itself notes that Expedia Group is one of the entities that is meant to be included when the document uses "we" and "our." And the Form 10-K was filed by Expedia Group itself. If Expedia Group includes itself among a group of entities that it says operates or controls certain websites or mobile applications, then that amounts to some evidence that Expedia Group in fact operates or controls those platforms.

Given that DDI owns, operates, and controls DashMart, it makes sense for DashMart job openings to be "at DoorDash, Inc." The FAC identifies two such DashMart job openings "at DoorDash, Inc." and there are many more which show that it is implausible that a "mistake" was made as to DDI being the employer of DashMart employees. *See* Ex. D. Further, under the adage that a picture is worth 1000 words, DDI's own video of DashMart operations shows all the DashMart workers wearing uniforms with DDI's logo ().¹⁸ As DashMart's owner and controller, it also makes sense that the specimen used to obtain DDI's U.S. trademark registration, attached hereto as Exhibit E for DashMart is described by DDI as "Screenshots of *Applicant's* [i.e., DDI's] mobile application showing use of the applied-for mark."¹⁹ FAC at ¶ 5. Further, the use of DDI's trademark on the sign for DashMart also indicates to the public that DDI owns,

21.1. Exs. B, C. Since DashMart is "fully owned, operated, and curated by" DDI, FAC at ¶¶ 12-13,  (Dkt. 62 at ¶ 29), which means that DDI has control over DashMart, it makes sense for DDI to not identify DDE as a subsidiary in its SEC statements. Further, companies are required to make disclosures that are material, and DDI's not disclosing DDE confirms that DDE is a non-material aspect of DDI's business, and thus, DDE is captive and operated by DDI. If DDE were truly an independently run subsidiary, then that would have been a material aspect of DDI's operation and required to be disclosed to the SEC.

¹⁷ *International Business Machines Corp. v. Expedia, Inc.*, Civil Action No. 17-1875-LPS-CJB, 2019 WL 1571680, at *4 (D. Del. Apr. 11, 2019), *report and recommendation adopted*, 2019 WL 4635137 (D. Del. Sept. 24, 2019).

¹⁸ "Introducing DashMart" (available at https://youtu.be/Yu-KT7mR_qQ (last accessed Nov. 21, 2024)).

¹⁹ If the mobile application were not *DDI's* mobile application, then it would have described the specimen as "Screenshots of a mobile application showing use of the applied-for mark" or "Screenshots of applicant's related company's mobile application."

controls, and runs DashMart. *See id.* at ¶ 3.

The Merrigan Decl. [REDACTED]

[REDACTED] (Dkt. 62 at ¶ 17), but in *Ameranth I*, Ms. Merrigan's declaration asserts [REDACTED] Case No. 2:22-cv-1776-WSH, Dkt. 23-1 at ¶ 11. This major discrepancy is meaningful, and Ameranth believes DDI is the owner of the DashMart leases.^{20, 21}

Turning to DDI's software engineers working in this district, DDI has a Platform Engineering Team in Pittsburgh. First, DDI issued public statements that it "do[es] have engineers in Pittsburgh." FAC at ¶ 26. Second, DDI intentionally hired engineers to *be in* Pittsburgh to work on its platform. *See* FAC at ¶¶ 25-27, 30; Ex. F (describing the Pittsburgh Platform Evolution Team and Pittsburgh job openings for that team). DDI's "Engineering Leader," Matt Ranney, is located in Pittsburgh, and he posted on LinkedIn "a link for our [i.e., DDI's] Pittsburgh site" and included a picture of a physical conference room. FAC at ¶ 30. He also posted that "[w]e are doing distributed systems and other interesting software in Pittsburgh. Come work with us." *Id.* Indeed, DDI's Platform Engineering Team in Pittsburgh has collaborated with CMU on the same technology covered by Ameranth's Network Patents. Ex. G. The Merrigan Decl. at ¶ 7 [REDACTED], but Ms. Merrigan's June 28, 2023 declaration filed in *Ameranth I*, Case No. 2:22-cv-1776-WSH, Dkt. 23-1, [REDACTED] which the Court can interpret as meaning DDI *did* operate or maintain such an office.

²⁰ Similarly, the Merrigan Decl. asserts that [REDACTED] (Dkt. 62 at ¶ 23) [REDACTED]

²¹ Inconsistencies in Ms. Merrigan's declarations are revealing and are at least a basis for venue discovery in this case as well as in *Ameranth I*.

Finally, DDI's contention that it does not require its software engineering team to be in Pittsburgh is false because DDI intentionally sought and hired software engineers for its *Pittsburgh* Engineering Team. *See* Ex. F at p. 3; Ex. H; Ex. I at pp. 2-3. Mr. Ranney, acting in his capacity as Pittsburgh Engineering Leader, also posted about what DDI was working on *in Pittsburgh* and re-posted a job search posting for a software engineer *in Pittsburgh*. *See* FAC at ¶ 30; Ex. J at pp. 2-3. When DDI advertises a job that does not require an employee be located in a specific location, the job posting states "United States – Remote." Ex. K. For DDI to argue that there is [REDACTED]

[REDACTED] (Dkt. 62 at ¶ 9) [REDACTED]

[REDACTED] (*id.* at ¶ 10) [REDACTED]

DDI has also had its employee(s) and intern(s) collaborate with CMU and regularly meet at CMU. For example, DDI's Mr. Ranney, worked with DDI's then intern, and CMU software engineering doctoral student, Christopher Meiklejohn, whose 2024 Ph.D. thesis (written while a DDI full-time employee) sought to solve the same technological problem that Ameranth's Network Patents are directed to and solved – the CAP Theorem Challenge. This is confirmed by Mr. Ranney's Instagram post, a DDI blog post, now-Dr. Meiklejohn's thesis proposal which confirmed his joining DDI's Platform Evolution team in Pittsburgh on p. 44, and joint technical papers that included CMU staff, Mr. Ranney and Dr. Meiklejohn as co-authors. Exs. G, L-N. For those multi-year research and development collaborations and meetings to occur, a meeting or conference room was regularly reserved for DDI's use which Ameranth believes venue discovery will confirm.

DDI's own public actions and public statements evidence it is the owner, operator, and controller of DashMart, it hired software engineers to work in Pittsburgh, and it publicly

collaborated with CMU there. DDI now wants the Court to simply ignore these facts and the public perception caused by DDI's own actions and statements to find venue improper. That is not equitable, and the Court should reject DDI's venue motion seeking to evade venue in this district.

B. DoorDash Fails to Meet Its Burden to Prove the Claims Are Invalid

Determining patent eligibility at the pleading stage is possible "*only* when there are *no* factual allegations that, taken as true, prevent resolving the eligibility question as a matter of law."²² The Network Patents' claims are presumed valid and patent eligible,²³ Defendants must therefore prove ineligibility under Rule 12(b)(6) and § 101 *by clear and convincing evidence*,²⁴ and "all factual inferences . . . must be weighed in favor of . . . the non-moving party."²⁵

Courts follow a two-step framework set forth in *Alice* for determining whether claims recite eligible subject matter.²⁶ The first step "is a meaningful one" that "cannot simply ask whether the claims *involve* a patent-ineligible concept. . . ."²⁷ Rather, the first step asks "whether the claims in these patents focus on *a specific means or method that improves the relevant technology* or are instead directed to a result or effect that itself is the abstract idea and merely invokes generic processes and machinery."²⁸ If the claims are not directed to an abstract idea, that ends the inquiry.²⁹ If the claims are directed to an abstract idea, then at step two, courts consider the patent claims as a whole, as well as the individual claim elements, to determine whether the claims reflect an "inventive concept," i.e., something more than "the application of an abstract idea using

²² *Aatrix Software, Inc. v. Green Shades Software, Inc.*, 882 F.3d 1121, 1125 (Fed. Cir. 2018).

²³ *Cellspin*, 927 F.3d at 1319.

²⁴ *See id.*

²⁵ *Visual Memory LLC v. NVIDIA Corp.*, 867 F.3d 1253, 1262 (Fed. Cir. 2017).

²⁶ *Alice Corp. Pty. Ltd. v. CLS Bank Int'l*, 134 S. Ct. 2347, 2355 (2014).

²⁷ *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1335 (Fed. Cir. 2016) (emphasis in original).

²⁸ *McRO, Inc. v. Bandai Namco Games Am. Inc.*, 837 F.3d 1299, 1314 (Fed. Cir. 2016).

²⁹ *Id.* at 1312.

conventional and well-understood techniques."³⁰ The Federal Circuit has "cautioned that courts must be careful to avoid oversimplifying the claims by looking at them generally and failing to account for the specific requirements of the claims."³¹ Yet Defendants did just this, and their conclusory brief fails to meet their burden to invalidate the claims.

1. The FAC's Plausible Factual Allegations Defeat Defendants' Motion

In *Cellspin Soft, Inc. v. Fitbit, Inc.*, the Federal Circuit held that "plausible and specific factual allegations [in the complaint] that aspects of the claims are inventive are sufficient [to overcome a motion to dismiss seeking to invalidate the claims under § 101]. As long as what makes the claims inventive is recited by the claims, the specification need not expressly list all the reasons why this claimed structure is unconventional."^{32,33}

For instance, the Federal Circuit in *Cellspin* found an inventive concept, crediting factual allegations in the amended complaint "that prior art devices . . . were 'inferior'" and the two-step, two-device structure of the invention was unconventional and "provided various benefits over prior systems."³⁴ Similarly, while being entirely ignored and un rebutted by Defendants, Ameranth's FAC confirms, for example:

- "The CAP Theorem Challenge states that it is not possible to design a distributed system

³⁰ See *Cellspin*, 927 F.3d at 1316; see also *McRO*, 837 F.3d at 1312; *Berkheimer v. HP Inc.*, 881 F.3d 1360, 1367 (Fed. Cir. 2018).

³¹ *McRO*, 837 F.3d at 1313 (quotations omitted).

³² *Cellspin*, 927 F.3d at 1317.

³³ Here, the claims explicitly recite technological benefits. For example, claim 1 of the '415 patent recites both "a master database comprising data and parameters of the at least one hospitality software application integrated with the at least one said web server computer and with a usable file structure dictated prior to execution, thus **improving efficiency and reliability**" and "wherein the at least one said web server computer is integrated with the MFCCS and is programmed with instructions . . . to enable the at least one said web server computer to further **improve its efficiency by using less computer resources** and less computing time through the avoidance of attempting communications modes of contact to hospitality entities and/or users and/or for subsequent user hospitality application task requests, likely to fail during the operational period of time if attempted again during that time."

³⁴ *Cellspin*, 927 F.3d at 1316-17.

on a network that achieves all three of these goals 100% of the time. This means that distributed database systems on a network were inefficient and could not be optimized for all three goals because all three goals (consistency, availability, and partition-tolerance) could not be simultaneously achieved. Thus, the technical challenge is to seek/achieve the most optimal combination." FAC at ¶ 63.

- "Prior to the Network Patents' claimed inventions in 2005, a technological problem existed in distributed database systems because changes to a distributed database created too much of a load on the system which resulted in the system and the system's processor not being able to efficiently process the changes, which in turn resulted in the database not being available to each node or not being available at all. In other words, due to the design of the distributed system at the time, the distributed system could crash and be unavailable due to not being able to efficiently and optimally process a change to the database." FAC at ¶ 64; *see also id.* at ¶ 65 (DDI recognizing the same technological problem).³⁵
- "The asserted claims of the '415 and '587 patents recite an inventive ordered combination and includes each of the following elements:
 - A web server with multi-modes of contact, multi-communications protocols, multi-user and parallel operational capabilities^[36];
 - at least one hospitality food/drink ordering software application
 - an advanced master database, with its own database API;
 - Middleware/Framework Communications Control Software (MFCCS), which enables at least one web server to communicate with at least two remote handheld computers and for multiple modes of contact and multiple communications protocols; and
 - at least one external software API, which integrates the hospitality software application and the MFCCS with the Internet and leverages the advanced master database to support learning, updating, and storing multiple communication modes of contact and related operational parameters.

This inventive combination of the above-listed elements in the Network Patents overcomes the challenge of simultaneously achieving consistency, availability, and partition-tolerance for a distributed database by changing the preconditions inherent in the environment for which these goals were typically articulated." FAC at ¶ 85.

- "The Network Patents disclose how the claimed inventions achieve web server improvements in both consistency and availability:
According to various embodiments of the present invention, messaging (e.g.,

³⁵ Ameranth's FAC explained that DDI recognized the same technological problem – the CAP Theorem Challenge – in 2020, FAC at ¶¶ 65, 121, and that "in 2015, DDI's Chief Executive Officer acknowledge[d] 'parallel processing' is not something humans can do." *Id.* at ¶ 68. The FAC also identifies additional statements and admissions DDI made which factually confirm that the MFCCS and layer approach claimed in the Network Patents improved computers. *Id.* at ¶ 120.

³⁶ As discussed on pp. 12-14 *infra*, the claimed "web server" is specially programmed to perform in an unconventional way, and the claimed "said web server computer" differs from a "web server computer."

wireless text messaging and/or wireless instant messaging) and/or text-to-voice functionality may be employed, for instance, in appointment, waitlist, and/or reservation operations. Such functionality might, in various embodiments, involve messaging (e.g., wireless messaging), text-to-voice, and/or two-way interactivity, and/or may involve communication via landline telephones, cellular telephones, and/or wireless devices.

'415 patent at 13:34-43; '587 patent at 13:44-52." FAC at 87.

Additional *undisputed* factual allegations are found in FAC ¶¶ 71, 77, 86, 89, 91-92, 96, 98-103.³⁷

Defendants are silent and do not dispute or rebut Ameranth's correctly presented factual assertions that show the claims' eligibility. Instead, they simply randomly quote a myriad of caselaw and do not delve into the substance of the claims or the FAC's plausible factual allegations. For example, relying only on attorney argument, Defendants contend "the claims and the specification state only 'result-based' functional aspirations, devoid of any details on '*how* to engineer or program' a system to achieve the results stated in the Asserted Claims" while quoting *Interval Licensing LLC v. AOL, Inc.*³⁸ and *In re TLI Commc'ns LLC Pat. Litig.*,³⁹ but fail to explain how, as evidenced in the declaration attached to the FAC, Dr. Goodrich was able to write source code – the technical language that controls the operation of a computer and its software – after reading the Network Patents' claims, which unquestionably contradicts their contention and proves that the "how" is provided in the claims and specification.

When the factual allegations in the FAC are actually considered, and viewed as being true, as this Court must do, it is clear that, in conformance with the binding precedent set forth in the

³⁷ In *Cellspin*, the Federal Circuit also found it was error for the district court to ignore allegations in the amended complaint that the "specific ordered combination of elements was inventive." 927 F.3d. at 1317. Consistent with *Cellspin*, here, the FAC alleges that "[t]he Network Patents' claimed ordered combinations provided computer improvements and were not routine or conventional in 2005," (*id.* at ¶ 90), and includes specific allegations that the claimed MFCCS was nonconventional. (*Id.* at ¶¶ 91, 99.) No evidence to the contrary is in the record.

³⁸ 896 F.3d 1335, 1343-45 (Fed. Cir. 2018).

³⁹ 823 F.3d 607, 612 (Fed. Cir. 2016)).

Federal Circuit's *Cellspin* decision, Defendants' Motion should be denied.⁴⁰

2. Defendants' Fail to Apply Ameranth's Proposed Claim Constructions

Ameranth defined 13 terms found in the Network Patents' claims with support from the intrinsic record. FAC at ¶ 61. All of these claim constructions must be fully considered and applied to properly determine what the claims are directed to.⁴¹ Despite knowing that all of the claim constructions matter to the § 101 analysis, Defendants chose to only argue two of them while attempting to reserve for their reply brief arguments for the remaining 11 claim constructions they ignored. (Dkt. 60 at 24 n.5.) That is a fatal mistake, improper, and not permitted.⁴² Indeed, reserving new arguments for a reply brief amounts to impermissible "sandbagging."⁴³

Even worse, when arguing their two selected constructions, Defendants failed to apply Ameranth's claim constructions by deceptively omitting the critical use of "said" in the claim element "at least one *said* web server computer" to ignore its vital claim construction, and cherry picked out-of-context text from Ameranth's pleadings. (Dkt. 60 at 15-16, 22-24.) Defendants are wrong that Dr. Goodrich contradicted the Network Patents' specification. (Dkt. 60 at 22-23). They misleadingly refer the Court to only ¶¶ 37-39 of Dr. Goodrich's declaration where he provides definitions from the *Microsoft Computer Dictionary* but fail to refer the Court to ¶ 40 which

⁴⁰ See *Cellspin*, 927 F.3d at 1316-19.

⁴¹ *Aatrix*, 882 F.3d at 1125; see also *BASCOM Global Internet Services, Inc. v. AT&T Mobility LLC*, 827 F.3d 1341, 1352 (Fed. Cir. 2016).

⁴² *United States v. Miah*, 546 F. Supp. 3d 407, 413 n.3 (W.D. Pa 2021) (Hardy, J.) ("As defense counsel is surely aware, it is 'inappropriate to raise an argument for the first time in a Reply brief.' *Oberwager v. McKechnie Ltd.*, 351 F. App'x 708, 711 n.5 (3d Cir. 2009)"); *American Infertility of New York, P.C. v. CNY Fertility, PLLC*, 21-CV-5566 (JMF), 2021 WL 4803539, at *1 n.1 (S.D.N.Y. Oct. 13, 2021) ("It is no answer to say that Defendant's reply is responding to an argument made in Plaintiffs' opposition . . . Defendant could have, and should have, anticipated that argument in its opening brief.").

⁴³ See *Rockwell Techs., LLC. v. Spectra-Physics Lasers, Inc.*, No. Civ.A.00-589 GMS, 2002 WL 531555, at *3 (D. Del. Mar. 26, 2002) (declining to address new arguments reserved for the reply brief) (quotation omitted).

eviscerates their wrong and misleading ¶¶ 37-39-based contention; Dr. Goodrich explains:

Thus, a person of ordinary skill in the art ("POSITA") would understand that, *rather than being only* a generic, conventional computer, the *improved* "web server" of claim 1, and *as it is defined in the preamble is specialized* to employ *technical improvements*, including multi-modes of contact, multi-communications protocols, multi-user, and parallel operational capabilities, which is supported by the specification. . . . Further, the above definition of a Web server from *Microsoft Computer Dictionary* *does not mention any* of limitations of a web server additionally having multi-modes of contact, multi-communications protocols, multi-user, and parallel operational capabilities. . . .

(Dkt. 51-3 at ¶ 40.) Defendants ignore that the claimed "web server" is specially programmed to perform in an unconventional way, and *that* unconventional way solves the CAP Theorem Challenge.⁴⁴ Similarly, Dr. Goodrich provided background about distributed computing and included *Microsoft Computer Dictionary* definitions of certain terms, such as "distribute," "distributed intelligence," "distributed network," "distributed processing," and "distributed database" (Dkt. 51-3 at ¶¶ 20-22), he then described the problems that existed at the time in 2005 in distributed database systems (i.e., the CAP Theorem Challenge) (*id.* at ¶¶ 23-24), and how the Network Patents' claims solved those problems. (*Id.* at ¶¶ 35-123.) Defendants do not contest the technological problems that existed at the time, and no record evidence contradicts that the claims' ordered combinations solved those technological problems.

It is important to recognize the difference between a "web server computer" and "*said* web server computer," just as Dr. Goodrich did, because the claims' limiting preambles provide antecedent basis for "said web server" in the respective claims. For example, the preamble of claim 1 of the '415 patent recites "An improved and intelligent web server computer with multi-modes of contact, multi-communications protocols, multi-user and parallel operational capabilities for use in a hospitality market comprising." Applying Ameranth's proposed constructions found

⁴⁴ *BASCOM*, 827 at 1350 ("[A]n inventive concept can be found in the non-conventional and non-generic arrangement of known, conventional pieces.").

at FAC ¶ 61,⁴⁵ as this court must do, means the claimed "*said* web server computer" is "an improved machine capable of running or executing server software that uses HTTP to serve up HTML documents and any associated files and scripts when requested by a client, such as a Web browser, and having the ability of a program to monitor its environment and initiate appropriate actions to achieve a desired state with two or more communication options including e.g. telephone calls, web pages, emails, pages, facsimiles, instant messages, and text messages, two or more protocols, two or more user and parallel processing of related operational parameters to improve the performance of the web server." Thus, Defendants are wrong because it is clear on its face that the claimed "said" web server computer" is *not* merely the generic web server that existed in 2005 and that was defined in the dictionary.

Despite the *SAP Am., Inc. v. InvestPic, LLC*⁴⁶ case examining vastly different claims from a different patent for a different invention compared to Ameranth's Network Patents' claimed inventions, Defendants' misleadingly quote text from *SAP* – "neither the claims nor the specification call for any parallel processing architectures different from those available in existing systems different from those" – to argue that the Network Patents' claimed "parallel operational capabilities" are merely "generic parallel processing components." (Dkt. 60 at 24.) This ignores Ameranth's claims and claim constructions and is a blatant misrepresentation of the Network Patents' claims that explicitly require a specific architecture – the MFCCS which is defined in Ameranth's claim constructions as "**Ameranth's** Middleware Framework Communications Control Software as shown in Figure 10 which enables via its centralized layer architecture the at least one web server." FAC at ¶ 61, and Figure 10 evidences the parallel processing capabilities.

⁴⁵ Evidence that supports Ameranth's proposed constructions are included in FAC ¶ 61.

⁴⁶ 898 F.3d 1161 (Fed. Cir. 2018).

(Dkt. 51 at ¶ 88, 51-3 at ¶¶ 44-52.) Specifically linking the claims to a patent figure evidencing structure in the claims of a patent, as Ameranth's claim construction does (i.e., Figure 10 and the specification's disclosure regarding same) has been held by the U.S. Supreme Court and the Federal Circuit to satisfy the "how" requirement and impart patent-eligibility.⁴⁷ Moreover, nothing in the record evidences *Ameranth's* MFCCS and its claimed layered architecture (and as integrated and combined with other unique Network Patents claim elements) was routine and conventional.

3. *Alice* Step One: The Network Patents' Claims Improve Technology

Step One of *Alice* asks whether the character of the claims "as a whole," when read "in light of the specification," is "directed to excluded subject matter."⁴⁸ In other words, what are the claims directed to? Under Federal Circuit law, specific improvements to a technology area, such as improving computer or network functionality, are not abstract ideas.⁴⁹ "[C]ourts must be careful to avoid oversimplifying the claims by looking at them generally and failing to account for the specific requirements of the claims."⁵⁰ That accuracy is "crucial to the sound conduct of the inquiries into the problem being addressed and whether the line of specificity of solution has been crossed."⁵¹ For that reason, it is improper to generalize the claims, as Defendants did, at "a high level of abstraction" that is "untethered from the language of the claims."⁵²

The FAC describes in detail the technological problems associated with prior distributed computing systems and their inability to concurrently optimize consistency, availability, and partition tolerance (e.g., avoiding or recovering from errors), which resulted in distributed systems

⁴⁷ *American Axle & Mfg., Inc. v. Neapco Holdings LLC*, 967 F.3d 1285, 1302 n.14 (Fed. Cir. 2020) (discussing *O'Reilly v. Morse*, 56 U.S. (15 How.) 62, 113 (1853)).

⁴⁸ *Enfish*, 822 F.3d at 1335, 1337.

⁴⁹ *See McRO*, 837 F.3d at 1314 (claims that "focus on a specific means or method that improves the relevant technology" are not abstract).

⁵⁰ *Id.* at 1313 (quotations omitted).

⁵¹ *TecSec, Inc. v. Adobe Inc.*, 978 F.3d 1278, 1294 (Fed. Cir. 2020).

⁵² *Id.* at 1293.

crashing and being unavailable due to not being able to efficiently and optimally process a change to the database.⁵³ FAC at ¶¶ 40, 62-65. The FAC also includes the inventor's explanation of those same technological problems and the real world systems he deployed to overcome the unreliability and failures of the conventional systems, which were caused by the CAP Theorem Challenge, and how and why he disclosed the inventive solutions in the 2005 new material added to the earlier 1999 specification. *Id.* at ¶¶ 66-80; Dkt. 51-5. Addressing these problems, the Network Patents' claims include a new MFCCS and recite specific, unconventional combinations and interactions between the components that uniquely address and solve problems with earlier systems, including simultaneously achieving consistency, availability, and partition-tolerance. FAC ¶¶ 85-87.

The Court must apply all of Ameranth's proposed claim constructions and doing so confirms Defendants' proposed "directed to" is wrong. More specifically, the FAC explains that when applying Ameranth's proposed constructions,⁵⁴ which necessarily means the following "directed to's" are correct because they are tethered to the actual claim language:

- [C]laim 1 of the '415 patent is directed to "an improved and intelligent web server computer that optimizes its performance and efficiency via parallel operations, a centralized layer architecture and by learning to intelligently choose and apply multiple communications modes/protocols likely to succeed in completing its tasks while avoiding those likely to fail." FAC at ¶ 48.
- [C]laim 9 of the '415 patent is directed to "a network of interconnected, intelligent and improved web server computers that are able to concurrently achieve consistency, availability, and partition-tolerance via applying rule-based intelligence to avoid communications modes known to fail." *Id.* at ¶ 49.
- [C]laim 15 of the '415 patent is directed to "a network of interconnected, intelligent and improved web server computers that are able to concurrently

⁵³ DDI's own statements support the allegations set forth in the FAC that the CAP Theorem Challenge posed a problem for distributed systems. FAC at ¶¶ 65, 121.

⁵⁴ The FAC accused Defendants of infringing "at least" certain claims of the Network Patents. FAC at ¶¶ 135, 143. By using "at least" and by explicitly defining and referring to claim 15 of the '415 patent in ¶ 50, it too is at issue at this stage of the case. Defendants knew and were on notice of this yet failed to address claim 15 of the '415 patent, thus, they have waived any argument against its unique "directed to" (inclusive of "dual modes"). *See* n.42 *supra*.

achieve consistency, availability, and partition-tolerance by applying dual modes of contact with the handheld users and rule-based intelligence to avoid communications modes known to fail." *Id.* at ¶ 50.

- [C]laim 1 of the '587 patent is directed to "an intelligent backoffice and handheld/mobile distributed computing network that is improved by being able to concurrently achieve consistency, availability, and partition-tolerance via parallel operations, continuously synchronized in real time web servers and multiple linked databases, and intelligent execution via choosing and applying varying modes of contact." *Id.* at ¶ 52.
- [C]laim 7 of the '587 patent is directed to "an intelligent backoffice and handheld/mobile distributed computing network that is improved by being able to achieve consistency, availability, and partition-tolerance via parallel operations and intelligent execution and by choosing and applying varying modes of contact." *Id.* at ¶ 53.

As can be seen from the above, none of these five claims is a representative of the others, as they are all have *different* "directed to's."⁵⁵ Yet, Defendants incorrectly argue claims 1 and 9 of the '415 patent and claims 1 and 7 of the '587 patent are directed to the purported abstract idea of "communicating hospitality-related information using a system that is capable of multiple modes of communication" and claim 1 of the '415 patent is representative. (Dkt. 60 at 15-16.) But the Step One inquiry "cannot simply ask whether the claims *involve* a patent-ineligible concept . . . "⁵⁶ and Defendants fail to adhere to the maxim that claims not be described "at such a high level of abstraction and untethered from the language of the claims."⁵⁷ Because Defendants are wrong as to what the claims are directed to, their arguments are wrong and their Motion should be denied.⁵⁸

⁵⁵ For example, contrasting the preambles of claim 9 of the '415 patent and claim 1 of the '587 patent readily evidences differences between the claimed inventions. Each of the claims' limiting preambles provides antecedent basis for other claim elements in their respective claims and thus cannot be ignored. Yet, Defendants ignored them.

⁵⁶ *Enfish*, 822 F.3d at 1335.

⁵⁷ *Id.* at 1337; *see also Alice*, 134 S. Ct. at 2354 ("[W]e tread carefully in construing this exclusionary principle, lest it swallow all of patent law.").

⁵⁸ *3G Licensing, S.A. v. HTC Corp.*, C.A. No. 17-83-LPS, 2019 WL 2904670, at *2 (D. Del. July 5, 2019) ("While it may be possible that claim 1 could be accurately characterized as directed to some abstract idea, all I need to decide today [at the motion to dismiss stage] is that the claim is not directed to the abstract idea articulated by defendant.").

Instead of conducting a proper analysis of the Network Patents' claims, Defendants conclusorily and wrongly argue that the claims do not improve computer functionality, solve any technological problem, do not claim a particular way of programming or designing the software, and they look only to Ameranth's prior cases involving different patents with different claims. (Dkt. 60 at 15-17.) But the Federal Circuit has made clear that all patents are entitled to their presumption of validity and eligibility,⁵⁹ and courts are *not* bound to decisions involving "different specifications, or different claims" when deciding patent-eligibility.⁶⁰

Here, unlike Ameranth's earlier claims invalidated under § 101, the claims *explicitly recite* programming details and many also claim the technological benefit, even though claiming the technological benefit is not required, and, as discussed above, the FAC explains how the claimed inventions solve the CAP Theorem Challenge, which improved distributed computing systems.⁶¹

For example, claim 9 of the '415 patent recites, with emphasis added:

wherein the at least one web server network is integrated with the MFCCS and *is programmed with instructions enabled to choose and apply a communications mode of contact for and with the hospitality entities and two or more different communications modes of contact during the same hospitality task with handheld users to execute hospitality application task requests with a first hospitality entity from said wireless handheld computers associated with their respective users, and further enabled to automatically choose and execute with alternate hospitality entities when inventory is learned to be unavailable at a first hospitality entity and then improve efficiency by applying rule based intelligence to not attempt again such a request with the first hospitality entity for a subsequent user request now known by the interconnected web server network as to be unavailable to enable the web server network to use less computer resources and*

⁵⁹ *Cellspin*, 927 F.3d at 1319.

⁶⁰ *Trading Techs. Int'l, Inc. v IBG LLC*, 921 F.3d 1084, 1095 (Fed. Cir. 2019) (citing *Data Engine Techs. LLC v. Google LLC*, 906 F.3d 999, 1011-12 (Fed. Cir. 2018) (holding a claim from one patent ineligible and claims from other patents that shared a specification eligible)).

⁶¹ *Cellspin*, 927 F.3d at 1317-18 ("As long as what makes the claims inventive is recited by the claims, the specification need not expressly list all the reasons why this claimed structure is unconventional. In this case, Cellspin made specific, plausible factual allegations about why aspects of its claimed inventions were not conventional The district court erred by not accepting those allegations as true.").

less computing time through the avoidance of attempting communications modes of contact to hospitality entities known in advance to fail to meet the subsequent user requests."

As another example, claim 1 of the '587 patent recites, with emphasis added:

wherein the **parallel operations capable network** is **integrated with the MFCCS** and the backend servers are **programmed with instructions executable to choose and apply** varying modes of contact during the same remotely initiated hospitality task, for and with the handheld/mobile customers and/or handheld/mobile equipped entity staff, **to intelligently execute and support completion of the hospitality application task requests.**

Nevertheless, Defendants' attorney argument incorrectly contends that "the claims and the specification state only 'result-based' functional aspirations, devoid of any details on '*how* to engineer or program' a system to achieve the results stated in the Asserted Claims."⁶² (Dkt. 60 at 18). If the claims did not teach the "how," Dr. Goodrich would not have been able to write the source code found in his declaration (Dkt. 51-3 at ¶¶ 101-11). Thus, Defendants' attorney-argument ignores facts and belies logic when (1) the record evidences a POSITA wrote source code based on the claims, and (2) patents are written for those of ordinary skill in the art and not laypeople, such as attorneys.⁶³ Defendants ask the Court to simply believe its attorney argument over a POSITA, essentially asserting that Dr. Goodrich fabricated source code, and he is willing to testify to the contrary. In addition, a POSITA would understand that a software algorithm can be described in multiple ways, including using prose, flowcharts, examples, figures, programming languages, and/or pseudocode, (Dkt. 51-3 at ¶¶ 94-99, 114-123), and a POSITA would be familiar

⁶² See *Fonar Corp. v. General Elec. Co.*, 107 F.3d 1543, 1549 (Fed. Cir. 1997) ("As a general rule, where software constitutes part of a best mode of carrying out an invention, description of such a best mode is satisfied by a disclosure of the functions of the software. This is because, normally, writing code for such software is within the skill of the art, not requiring undue experimentation, once its functions have been disclosed.").

⁶³ *In re Nelson*, 280 F.2d 172, 181 (C.C.P.A. 1960), *rev'd on other grounds*, *In re Kirk*, 376 F.2d 936 (C.C.P.A. 1967) ("The descriptions in patents are not addressed to the public generally, to lawyers or to judges, but, as section 112 says, to those skilled in the art to which the invention pertains or with which it is most nearly connected.").

with how to configure certain specialized hardware modules based on language found in the Network Patents' claims and by leveraging the MFCCS architecture. (*Id.* at ¶¶ 99-113.)

Defendants rely on the *Olo* case, which pertained to claims of the '651 patent, to argue that the Network Patents' claims are automating a business practice and use "'typical' hardware components and would be programmed with 'commonly known' software programming steps."⁶⁴ (Dkt. 62 at 17-18.) However, Defendants are wrong (*see, e.g.*, FAC at ¶ 40), and DDI has taken contrary positions at the USPTO for its own patents and patent applications in the same technological field as the Network Patents which mirror or at least have substantially similar terminology and phrasing as the Network Patents (*id.* at ¶¶ 123-29), and DDI has sought to unfairly copy many of the inventive concepts of the Network Patents. (*Id.* at ¶ 42.) First, unlike the claims in *Olo*, the Network Patents' claims are directed to and solve the CAP Theorem Challenge, which is a technological problem in distributed computing systems and not a business practice. Second, although the Defendants seek to mislead the Court into believing that solving the complex CAP Theorem Challenge can be done by hand—it cannot—and that "parallel operational capabilities," which involves parallel processing, is something that can be done by hand with pen-and-paper, DDI's Chief Executive Officer acknowledge[d] ***'parallel processing' is not something humans can do.***" FAC at ¶ 68. Third, no text in the Network Patents states the combination of steps as claimed were commonly known or that the design of the Ameranth framework and multi-layered system architecture of the overall systems were commonly known, FAC at ¶ 55, and, as DDI knows from its own patent prosecution filings at the USPTO and confirming DDI argues one thing to this

⁶⁴ The district court's *Olo* decision was affirmed via Rule 36, which means the district court entered the correct judgment, not that the district court performed the correct analysis. *Rates Technology, Inc. v. Mediatix Telecom, Inc.*, 688 F.3d 742, 750 (Fed. Cir. 2012) ("Since there is no opinion, a Rule 36 judgment simply confirms that the trial court entered the correct judgment. *It does not endorse or reject any specific part of the trial court's reasoning.*").

Court yet the opposite to the USPTO, the use of "commonly used computer language" can be a benefit and refers to the computer language being used, such as C, C++, Java, etc., not the specific, non-routine, non-conventional claimed algorithms that would be expressed in such a language. FAC at ¶¶ 123-29 (DDI's patents disclosing "any suitable computer language" can be used to implement the inventions); *see also id.* at ¶¶ 111-12; Dkt. 51-3 at ¶¶ 94-99.

Further, comparing claim 1 of the '651 patent and claim 9 of the '415 patent evidence very notable differences between the two claims. (Dkt. 51-6.) For example, unlike '651 patent claim 1, '415 patent claim 9 is for "[a] network of interconnected, intelligent and improved web server computers with multi-modes of contact, multi-communications protocols, multi-user and parallel operational capabilities for use in a hospitality market," and includes a different master database and a "MFCCS and its layer architecture" that is found *nowhere* in '651 patent claim 1. The MFCCS and its layer architecture and *how* it enables and interacts with the other claimed components are critical for enabling scalability, modularity, and maintainability in the claimed systems, which solved the CAP Theorem Challenge.

4. Alice Step Two: The Claims Include Multiple Inventive Concepts

As an initial matter, the Network Patents' claims are directed to technological improvements and the *Alice* inquiry ends. Should the Court decide to consider Step Two, Defendants' arguments concerning what is routine and conventional raise factual disputes which alone necessitate denial of their Motion,⁶⁵ and Defendants' self-serving use of the terms "generic" and "routine" throughout their opening brief is an attempt to ignore the requirement that the Court consider "elements of each claim both individually and '*as an ordered combination*' to determine whether the additional elements 'transform the nature of the claim'

⁶⁵ *Berkheimer*, 881 F.3d at 1369 ("Whether something is well-understood, routine, and conventional to a skilled artisan at the time of the patent is a factual determination.").

into a patent-eligible application."⁶⁶ In the context of a Rule 12 motion, "[w]hether the claim elements or the claimed combination are well-understood, routine, [or] conventional is a question of fact,"⁶⁷ and "[a]ny fact, such as this one, that is pertinent to the invalidity conclusion must be proven by clear and convincing evidence."⁶⁸ Because courts must accept Ameranth's factual allegations as true, "plausible and specific factual allegations that aspects of the claim are inventive [or not conventional] are sufficient" to overcome the Step Two inquiry.⁶⁹ As discussed above in Section III.B.1, the FAC contains many such plausible and specific factual allegations. In addition, "[t]he inventive concept inquiry requires more than recognizing that each claim element, by itself, was known in the art. . . . [A]n inventive concept can be found in the non-conventional and non-generic arrangement of known, conventional pieces."⁷⁰

Defendants ignored the plausible factual allegations regarding the inventive concepts found in the Network Patents' claims and those allegations are supported with evidence. *See, e.g.*, FAC at ¶ 50, 67, 71-75, 78, 85, 86, 90-96, 100-03, 106, 110. Reviewing those inventive concepts confirm the claims include "something more" than any alleged abstract idea and Defendants' assertions to the contrary are merely uncorroborated attorney argument. For example, as explained in FAC ¶¶ 100-01, claim 1 of the '415 patent recites an ordered combination that includes the three-way API ordered combination operating together and in

⁶⁶ *Amdocs (Israel) Ltd. v. Openet Telecom, Inc.*, 841 F. 3d 1288, 1293 (Fed. Cir. 2016) (quoting *Mayo*, 132 S. Ct. at 1298, 1297).

⁶⁷ *Aatrix*, 882 F.3d at 1128.

⁶⁸ *Berkheimer*, 881 F.3d at 1369.

⁶⁹ *See Cellspin*, 927 F.3d at 1317-18 (reversing district court's Rule 12 dismissal); *see also Aatrix*, 882 F.3d at 1126-27 (finding that a proposed amended complaint included allegations that the asserted claims contain inventive concepts and would therefore survive a Rule 12(b)(6) motion); *Berkheimer*, 881 F.3d at 1368-69 (holding factual issues regarding what is routine or conventional precluded summary judgment).

⁷⁰ *BASCOM*, 827 F.3d at 1350.

parallel along with the specific structuring of the master database which resulted in "more efficient web searches within the web server and the master database and thus eliminates the bottleneck for other processes that the web server may be executing by *reducing* the need for *resource intensive* pointers" and its "rule based intelligence" improves the web server's "efficiency by using less computer resources and less computing time through the avoidance of attempting communications modes of contact . . . which innately defines how to code the intelligence and which improves the efficiency and reliability of the web server, thus improving web servers and solving an internet centric technical problem." Because these factual allegations are unrebutted, this alone justifies denying Defendants' Motion.

The CAP Theorem Challenge identifies specific challenges for the designers of distributed systems, that it is not possible using a single network modality, like the Internet, to simultaneously achieve consistency, availability, and partition tolerance. (Dkt. 51-3 at ¶ 24; FAC at ¶¶ 62-64.)) Like *BASCOM* and *DDR Holdings*, the properly construed Network Patents' claims recite at least the inventive concept of a specific, discrete implementation of (1) an intelligent web server with multi-modes of contact, multi-communications protocols, multi-user and parallel operational capabilities; (2) at least one hospitality food/drink ordering software application; (3) an advanced master database, with its own database API; (4) MFCCS, which enables at least one web server to communicate with at least two remote handheld computers and for multiple modes of contact and multiple communications protocols; and (5) at least one external software API, which integrates the hospitality software application and the MFCCS with the Internet and leverages the advanced master database to support learning, updating, and storing multiple communication modes of contact and related operational parameters, which results in the claimed inventions achieving consistency, availability, and partition-tolerance (e.g., overcoming

the CAP Theorem Challenge, and thus improving the efficiency and reliability of the claimed web server computers and networks).⁷¹ FAC at ¶¶ 84-86, 107-09. For example, when a communication link is down in one communication modality or protocol, the claimed systems can then intelligently utilize another communication modality or protocol that is not down, thereby preventing the systems from crashing and being unavailable.

The Network Patents' claims recite that their ordered combination of elements provides for the improvement in the functionality of computers and/or networks, such as "improving efficiency and reliability" and/or enabling the claimed web server computer "to further improve its efficiency by using less computer resources and less computing time through the avoidance of attempting communication modes of contact to hospitality entities and/or users and/or for subsequent user hospitality application task requests likely to fail during the operational period of time if attempted again during that time." This improved functionality is supported by the common specification.^{72,73} Therefore, the claimed web server and network improve the functionality of computers and/or computer networks for applications in the hospitality industry, which used only a single mode of communication, with a system that utilizes multi-modes of communication and thereby overcomes the limitations of the CAP Theorem Challenge. *See, e.g.*, FAC at ¶ 86.

Moreover, the claim elements include **how** to achieve these improvements. As an example, claim 1 of the '587 patent identifies the MFCCS as "enabl[ing]" and "integrated" with other claim elements to accomplish the goal of solving the CAP Theorem Challenge. As explained above,

⁷¹ *BASCOM*, 827 F.3d at 1351; *DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245, 1257-59 (Fed. Cir. 2014).

⁷² *See, e.g.*, '415 Patent at 2:64-3:3, 3:4-20, 4:55-5:5; '587 Patent at 2:65-3:4, 3:5-21, 4:56-5:7.

⁷³ The Network Patents' specifications expressly tie the consistency and availability achieved in the claimed inventions to their multi-modes of communication along with parallel operational capabilities, *see, e.g.*, '415 patent at 12:9-13, 10:64-67; '587 patent at 12:10-14, 10:64-47, which a POSITA would, and in fact did, understand effectively provides partition tolerance.

Defendants' allegations that '415 patent claim 1 does not explain how any of the claimed functions are implemented (Dkt. 60 at 19), is wrong, is not supported by the record, and is mere attorney argument. Defendants' argument also ignores that the claims *explicitly recite* programming details which provide the "how" for the patent-eligibility analysis. *See supra* pp. 18-19.

Defendants incorrectly argue that "[t]he Asserted claims recite nothing more than a '[w]holly generic computer implementation' with 'purely functional' elements to computerize the 'pen and paper' operations of a hospitality business, such as a restaurant." (Dkt 60 at 19 (citations omitted).) As explained above and as the Court will find, there is no record evidence supporting Defendants' argument that the claimed and properly construed "*said* web server computer" including its physical components as claimed and configured is *not* an improvement and is routine and conventional activity. The record confirms and evidences that the "*said* web server computer" is a technological improvement and so are all the claimed inventions of the Network Patents.

VIII. CONCLUSION

For the foregoing reasons, Ameranth respectfully requests Defendants' Motion be denied in full, or in the alternative, the case against DDI be transferred to the District of Delaware and the case against the Eat'N Park defendants be stayed. If the court desires more facts as to the venue dispute, Ameranth requests venue discovery including at least (1) depositions of Ms. Merrigan, Mr. Ranney and Dr. Meiklejohn and (2) discovery of (a) the agreement between DDI and DDE to the extent it exists, (b) the purported intellectual property license from DDI to DDE, (c) the agreement between DDI and CMU, (d) the DDI and DDE organizational charts, and (e) a review of all financial intercompany transfers between DDI and DDE, including, but not limited to, those referenced in Ms. Merrigan's declaration, and Ameranth be permitted to amend its complaint to address any new facts and any identified issues.

Dated: December 3, 2024

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CERTIFICATE OF SERVICE

I hereby certify that on December 3, 2024, I caused a copy of the foregoing document to be served by e-mail to the following counsel listed below.

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